

September 16, 2004

TO: EQB Board Members

FROM: George Edwin Johnson  
EQB Staff 651 296-2888

SUBJECT: **Two Permits for Mankato Energy Center (MEC)**  
Site Permit (655 megawatt Large Electric Power Generating Plant)  
Pipeline Routing Permit (4.3 miles, 20 inch diameter natural gas line)

**Action:**

The Board is asked to issue a Site Permit for a new 655 megawatt power plant in Blue Earth County, Minnesota, and a Pipeline Routing Permit for a 4.3 mile long natural gas pipeline to connect to an existing natural gas pipeline. The permittee is Mankato Energy Center, LLC. Two sets of Findings of Fact and two separate permits are included in the Board packet.

**The Project**

Mankato Energy Park, LLC, is a limited liability corporation wholly owned by Calpine Corporation. MEC intends to build a new 655 megawatt power plant outside the city limits of Mankato, Minnesota. The plant will be fired with natural gas and fuel oil. The plant is a combined cycle plant, with two gas turbines and two steam generator turbines, a steam turbine generator a condenser and cooling towers system. It is expected to be operational in summer 2006.

The proposed site is located just north of the Mankato city limits in Lime Township in an area zoned for industrial use. The site is a former limestone quarry that has been mined to completion and currently serves as a demolition landfill and composting facility. The site is approximately 25 acres in size. It is located next to Xcel Energy's Wilmarth Substation.

To provide the facility with natural gas, MEC proposes to construct a 4.3 mile long pipeline to connect to a Northern Natural Gas pipeline located about three miles east of the facility site. The pipeline will have a nominal outside diameter of 20 inches. The minimum pipeline throughput design is one million cubic feet (MMcf) per day. It is designed to have a maximum throughput capacity of 126 million cubic feet of natural gas per day at a maximum allowable operating pressure of 936 pounds per square inch gauge (psig). The normal operating pressure of the pipeline will be between 525 psig and 550 psig. The pipeline will mainly parallel an existing Xcel Energy 115 kilovolt transmission line right-of-way.

## **Certificate of Need**

The proposed facility consists of two units essentially. The first unit (approximately 325 MW) was selected by Xcel Energy as part of a competitive bidding process approved by the Public Utilities Commission and is exempt from the certificate of need requirement. The second unit (another 325 MW approximately) requires a certificate of need and that is the matter that was considered by the PUC as part of this joint process. On September 9, 2004, the Public Utilities Commission issued a certificate of need for the second half of the project. The EQB may now make a siting decision on the entire 655 MW project because the PUC has approved the entire project. A certificate of need is not required for the pipeline because the pipeline is not long enough to fall within PUC jurisdiction.

## **The Power Plant**

MEC applied to the EQB for a Site Permit for the plant in March 2004 under the alternative permitting process. The EQB staff held a public meeting in Mankato in June to solicit comments on the scope of the Environmental Assessment the staff would prepare. A number of interested persons attended the public meeting but no objections to the project were raised and no additional sites were suggested for consideration. The Lime Township site was the only site considered. The Environmental Assessment was completed and available for public review on July 2, 2004.

A public hearing was held on July 12 and 13 in Mankato. Administrative Law Judge Allan W. Klein presided at the hearing. The hearing was a joint hearing held with the Public Utilities Commission to consider both a certificate of need and a site permit. Judge Klein issued his report on August 20, 2004, and recommended that a certificate of need be granted and a site permit for the proposed site issued. The Findings of Fact prepared by the staff adopt the Judge's findings in their entirety with the exception of an amendment to one finding regarding MEC's intended handling of wastewater. The amendment was requested by MEC to reflect the latest thinking on how the wastewater will be handled.

## **The Pipeline**

***Pipeline Partial Exemption request.*** In April, 2004, the Mankato Energy Center, LLC (MEC) filed an application for a pipeline routing permit and for a partial exemption from pipeline route selection procedures to construct a proposed 4.3 mile natural gas pipeline from an interconnection with a Northern Natural Gas pipeline located in Blue Earth County, MN to a MEC large electric power generating plant under construction near Mankato in Blue Earth County. The Board is asked to decide whether the project qualifies for a partial exemption and if so, issue a permit designating the route and establishing permit conditions.

The Pipeline Routing Permit process is different than the Site Permit process. A separate public meeting was held in Mankato on June 15, 2004 to discuss the proposed pipeline

with interested persons. No objections were raised at the public meeting or during the comment period. A separate environmental review document is not required as part of the pipeline permitting process but the staff did discuss the pipeline in the Environmental Assessment prepared on the facility.

There is no judge's report with regard to the pipeline, although Judge Klein did address certain aspects of the pipeline project in his report on the power plant. For this reason a more detailed discussion of the pipeline project is included in this memorandum. The staff has drafted proposed Findings of Fact, Conclusions, and Order with regard to the pipeline, and these documents are in the Board packet.

***Standard for Partial Exemption.*** Under Minnesota Rules part 4415.0040, subd. 2, an applicant is entitled to a partial exemption from the full siting procedures if the proposed pipeline will not have a significant impact on humans or the environment. The main differences between the partial exemption process and the full process are that the full process requires an evaluation of alternative routes and the holding of a contested case hearing. The partial exemption process does not require either of the above, although a public meeting is held in the area to solicit public input.

***Standard for Pipeline Route Selection.*** Regardless of which process is followed, in determining what route to designate and what conditions to include in a permit, the Board is required to consider the characteristics, the potential impacts, and mitigation measures associated with the proposed pipeline and select a route that minimizes human and environmental impacts. Minnesota Rules part 4415.0100, subp. 2.

***The Route.*** The proposed 4.3 mile natural gas pipeline, as shown on the map attached to the permit, will be located entirely in Blue Earth County in south central Minnesota. The Pipeline will traverse from the NNG interconnection point west along the Southern boundary of Sections 27 and 28. At a point in the SE  $\frac{1}{4}$  of Section 28, the Pipeline will proceed south into the NE  $\frac{1}{4}$  of Section 33. The Pipeline will continue west along the Northern boundary of Sections 33 and 32. At a point in the NW  $\frac{1}{4}$  of Section 32 the Pipeline will proceed in a generally diagonal fashion southwesterly into Section 31 terminating at the power plant, which is located in the SW  $\frac{1}{4}$  of Section 31. The Pipeline will be approximately 4.3 miles long. The route identified by MEC is also acceptable to all affected landowners.

***The Pipeline.*** The pipe will have an outside diameter of 20 inches and a nominal wall thickness of 0.312 inches. When the pipe crosses roads and streams, the pipe wall thickness will be 0.5007 inches. The proposed natural gas pipeline and associated facilities are designed to have a maximum throughput capacity of 126,000 (Mcf) (thousand cubic feet per day). The minimum throughput design is 1,000 Mcf per day. The normal operating pressure of the pipeline and associated facilities will be between 525 pounds per square inch gauge and 550 psig. The estimated total cost of the pipeline is approximately \$6.2 million.

***Land Requirements.*** MEC proposes to obtain from 20 landowners a permanent right-of-way fifty (50) feet in width. Based on a length of 3.7 miles, the MEC route will require approximately 24 acres of new right-of-way. MEC also proposes to obtain from landowners an additional twenty-five (25) feet of temporary workspace. It is anticipated that this space would not be fully utilized, but would give the construction crews approximately 75 feet of workspace if needed. Approximately 14 acres of temporary workspace will be acquired. Temporary right-of-way or workspace will revert to landowners upon completion of construction.

***Trench and Depth of Cover Requirements.*** The trench in which the pipe is placed will have a minimum depth of (80 inches), to allow for a minimum of 54 inches of ground cover to the top of the pipe. The trench will have a minimum width of 33 inches for the 20-inch pipe. The top and bottom widths are determined by soil conditions. In sandy soils, a wider trench will be necessary for sidewall stability. The trench required for the proposed pipeline will result in a minimum excavation volume of 16,100 cubic yards of soil.

***Water Crossings.*** The pipeline will cross one large creek, a drainage ditch and several small wetlands. The permittee will apply for appropriate DNR permits and comply with all permit conditions.

***Agricultural Impact Mitigation Plan.*** One of the conditions of the permit requires the permittee to comply with the construction practices and mitigation measures of an agricultural mitigation plan that has been developed. The Plan is based on an agricultural impact mitigation plan that was developed for the Hutchinson pipeline a few months ago and was modified as appropriate for the Mankato Energy Center pipeline project.

***Procedural Requirements.*** The EQB held a public information meeting in Mankato on June 15, 2004. Notice of the meeting was mailed to landowners and local officials and published in the local paper and in the EQB Monitor. Approximately 12 people attended the information meeting. There were comments and questions about wetland crossing and agricultural land restoration requirements of the project registered at the meeting. All persons at the pipeline meeting were in support of the project. No one submitted comments on the pipeline in writing.

## **High Voltage Transmission Lines**

High voltage transmission lines will have to be constructed to connect the proposed facility with the transmission grid. As part of the project, Xcel Energy intends to construct three transmission lines from the facility to the nearby Wilmarth Substation. These lines will be approximately 1000 feet in length and will be entirely on Mankato Energy Center or Xcel Energy property. The proposed lines are a 345 kV line and a double-circuit 115 kV configuration.

Xcel Energy did not apply for the Route Permits for the three lines until August 2004, and it was not possible to complete the review of those lines in time to have the Board

consider the Route Permits at the same time as the Site Permit. A public meeting has been scheduled for late in September to solicit public input into the scope of environmental review of the proposed lines. The staff anticipates that the matter of issuance of the Route Permits can be brought to the Board for decision at the November Board meeting.

### **Significant Issues**

No significant issues have arisen in the course of all the public meetings and public hearings that were held. No person objected to the construction of this facility on the proposed site or construction of the required gas pipeline along the route proposed. The administrative law judge recommended issuance of the Site Permit for the proposed site.

While no person has raised any concerns about the pipeline route, and it is only 4.3 miles long, the staff has developed an Agricultural Impact Mitigation Plan that is an enforceable part of the Pipeline Routing Permit. Mankato Energy Center has committed to comply with its terms as the requirements become applicable during construction of the pipeline.

### **Staff Recommendation**

The staff recommends that the Board grant a Site Permit for the proposed facility on the Lime Township site near Mankato, Minnesota. In addition, it is necessary for the Board to find that the EA adequately addresses the issues identified in the scoping decision. The Findings of Fact, Conclusions, and Order prepared by the staff will implement both of these decisions.

The staff also recommends that the Board issue a Pipeline Routing Permit for the pipeline along the proposed route. A separate set of Findings of Fact, Conclusions, and Order have been prepared for the pipeline permit.

Each of the permits contains certain conditions. These are based on the information in the applications and in the environmental review documents. The conditions reflect the commitments and intentions of the Applicant in constructing the facilities. Mankato Energy Center does not object to any of the conditions.

The Board should act first on the Site Permit, because the Pipeline Routing Permit depends on EQB approval of the site preferred by MEC.